DOCUMENT RESUME

ED 232 358 EC 152 638

AUTHOR Durant, Sherri Lynn
TITLE I.G.B.: An Educational Treatment Design for the Autistic Child and Adolescent.
PUB DATE Nov 82
NOTE 39p.; Paper presented at the Annual Conference of the Association for the Severely Handicapped (9th, Denver, CO, November 4-6, 1982).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Descriptive (141)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adolescents; *Autism; Children; *Cues; *Independent Study; Job Skills
IDENTIFIERS Individually Guided Behavior

ABSTRACT

The Individually Guided Behavior (IGB) concept was designed to help autistic children and adolescents structure their time and increase independence in work skills activities. The approach is also designed to reduce specificity of performance output, helping the child or adolescent to rely on environmental rather than teacher initiated cues for responding. Workjobs, one of three program components, features behavior training based on vocational activities that may be encountered in sheltered workshop settings (such as collating, sorting/folding, and simple counting). Bucket work is another behavior training segment in which students work on independent or nearly independent vocational, fine motor, language, self help, daily living, or cognitive tasks. Another component of the IGB design is a station set up in which students engage in a variety of one on one, small group, or independent tasks. During an IGB component, students function for 15 to 30 minutes with no teacher cueing or intervention. Two reinforcer systems are implemented to enhance right to left progression, delay of payoff for performance, and responsibility for payoff. A symbol system using stick figures was designed as an alternative to teacher cueing, and is employed in books providing assignments and directions to students. (Sample pages are included.) (CL)

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I.G.B.: AN EDUCATIONAL TREATMENT DESIGN FOR THE AUTISTIC CHILD AND ADOLESCENT

Sherri Lynn Durant, M.A.
205 Carl Drive
Chapel Hill, N. C. 27514
919-967-5770

EC152638

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Paper presented at the Annual Conference

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I.G.B.: AN EDUCATIONAL TREATMENT DESIGN FOR THE AUTISTIC CHILD AND ADOLESCENT

The Individually Guided Behavior concept is an educational treatment program developed in response to the autistic child's tendency to specialize output, depend on teacher cues as crutches for responding, and rely on adult intervention for environmental structuring. The I.G.B. educational treatment program was designed therefore to foster: 1) a reduction in this specificity of performance output, 2) an ability to structure time, and 3) independence in work skills activities. This treatment design is comprised of several components which serve as the basis for daily classroom programming and scheduling. Within the rubric of this educational program, the concept of "self-cued" behavior is emphasized, and teacher cueing is reduced as much as possible. Teacher behavior, when functioning within the rubric of this program, shifts from cueing student behavior to reinforcing student performance. Such an educational treatment design guards against victimizing children into a state of learned helplessness. Minimizing teacher intervention, enhancing task orientation and organization skills, anticipatory responding, and independent work skills activities are among those results which the I.G.B. proposes to promote. In summation then, not only was the I.G.B. concept designed to strengthen deficient responding modes in the autistic child, but also to provide the framework within which the teacher's role shifts from cueing student behavior to reinforcing student performance. The underlying philosophy of the I.G.B. concept is that the child, in order to survive in the real world, needs to rely on environmental cues for responding rather than demanding that teachers or other significant adults provide such cues.

PROGRAM COMPONENTS

COMPONENT 1: Workjobs

Workjobs is a 15 minute behavior training component designed to introduce the pre-adolescent and adolescent student to vocational activities he may encounter in a sheltered workshop setting. Workjobs is an informal training session during which time students sit on carpet squares on the floor with their assigned task. Such informality encourages generalization of on-target attending behaviors from a stringent chair and table or desk surrounding to an informal somewhat distracting setting. Students must refer to their notebooks in order to retrieve their assigned workjobs. Each workjob is placed in a numbered cardboard box and placed on a shelving unit. Students must discriminate their assigned workjob number from those on the shelf. Once each student has retrived his/her workjob, a timer is set for 15 minutes. Those who complete their assigned task before the bell rings receive massive payoff, such as sensory swinging, sensory play, powerful edibles such as coke or chips, or opportunites to engage in highly desired activities. Students who do not complete their task prior to the bell are still expected to finish their task, and are reinforced for completion. Reinforcement for completion after the bell has rung is much less intense and less rewarding and desirable than reinforcement for completion prior to the bell. Such procedure encourages and rewards the child for prolonged on-target, goal-directed behavior.

Examples of workjob activities are: clipping appropriate number of clothespins to numbered hangers, collating cards using color-coded cues, sorting/folding socks, counting several small beans into each section of an egg carton, etc. Additional ideas for workjob activities can be secured by visiting local sheltered workshops and utilizing your own resources. In summation, workjobs is designed to enhance independent work skills, proficiency in vocational tasks, generalization of work performance, and to increase speed and accuracy of performance.

COMPONENT 2: Bucket Work

Bucket work is a 30 minute behavior training segment which plays a very significant role in the child's daily educational program. This component of the IGB design proposes to enhance and refine attending skills, independent work skills, and initiation, completion, and termination of task. A conventional plastic dishpan serves as the receptacle for numerous tasks the student is capable of performing. This training segment serves as a practice period, during which time students may practice newly trained skills, or periodically rehearse previously mastered tasks in order to enhance retention. Because this component is geared toward enhancement and refinement of behavioral functioning, rather that toward the actual teaching of new skills, it is imperative that the child's bucket be comprised of either: 1) tasks he has already mastered and is capable of performing independently, or; 2) tasks which the child is capable of mastering with little or no intervention. Although the tendency may exist to fill the child's bucket with fine motor manipulatives, such as puzzles or stacking blocks, a vast array of materials may be and should be included in each child's bucket. A typical bucket may include the following materials:

1) A vocational task, such as counting beans into each tray of a muffin tin, bagging the beans once the tin has been completed.
2) A fine motor writing task, such as coloring within lines, copying shapes, tracing letters, etc.
3) A fine motor manipulation task, such as snapping together wooden blocks.
4) A pre-vocational sorting task, such as sorting several types of dried beans, or a variety of buttons.
5) A language task, such as sorting pictures according to function, for example: Things you eat vs. things you ride.
6) A self-help task, such as sewing buttons on cloth, or lacing a color-coded shoe.
7) A daily living task, such as matching coins to jig, or relaying personal data through the usage of a typewriter.

8) A cognitive task, such as ordering numbers or sequencing patterns.

9) A fine motor scissors task, such as snipping paper, cutting cloth, cutting geometric shapes, etc.

In addition to these task materials, the student's bucket must also include the following:

1) A bell to be utilized by the child to signal completion of task.

2) Several popscicle sticks and a small can for the child to record the number of tasks he has completed.

3) A small cup to serve as a reinforcer receptacle.

4) A sheet of plastic or paper to designate and define task space and encourage left to right task approach skills.

The student is trained to retrieve one task, disassemble the components therein, placing them on the plastic sheet on his left, and commence the task. Once the task has been completed, the student rings his bell to signal recognition of completion, places one stick in his can to record completed work, and produces manual, gestural, or verbal language to indicate completion of task. At this point, then, the child receives a reinforcer in his cup.

The educational significance of bucket work is that it trains the student to organize tasks in a left to right progression, to work independently on task with only minimal adult supervision, to organize work performance so as to reduce off-target, spacing behavior, to take responsibility for retrieving, setting up, and clearing of materials, to take responsibility for recording work performance, and to increase production or performance rate within an alloted time frame.

COMPONENT 3: Station Rotation

Station Rotation serves both as a behavior training component of the IGB design, and a one-to-one or small group teaching time. Nine stations are set up within the classroom. Seven of these stations are geared toward independence and self-structuring, and therefore are behavior training stations. These stations are; library, sensory, reading, play, fine motor, gross motor, and art. The other two stations are actual teaching stations and are manned by either teacher or aide. These are the cognitive and the language stations.

The two teaching stations, language and cognitive demand that the child engage in either one-on-one or small group teaching tasks. Activities presented to the student during this time are based on his/her IEP objectives. As with other programming domponents geared toward independent functioning, students must refer to their notebooks in order to retrieve their station assignments. Remember that station assignment cues are either a pictoral or stick figure representation of the student engaging in activity at a particular station. Once at his assigned station, the student is expected to retrieve and wear the necklace provided for him. These necklaces depict that representation which corresponds to the station symbol. Necklaces serve as a visual reminder to the student of his station assignment, and can be used to cue the student in the event that he leaves his assigned station.

Each student is assigned to three stations per day. Each station lasts for 15 minutes, during which time the student is expected to perform tasks, interact with materials, or engage in activities. For example:

Art: paint, paper and paste, paper punch, scissors, saltdough, colored chald, crayons.

Library: catalogues, magazines, books, headphones and music.

Sensory: bean table, beans and rice bowls, measuring cups, scoops.

Play: stimulation toys such as light brite, water basketball, pinball.

Fine Motor: fine motor manipulatives such as; puzzles, lacing boards, stacking cubes, form boards.

Gross Motor: swing, balance disc, scooter board, small trampoline, rubber balls, yarnballs.

Reading: language master

COMPONENT 4: I.G.B.

IGB is a behavior training component designed so that the child may function for 15-30 minutes with no teacher cueing or intervention. Once again, students refer to their notebooks to retrieve their assigned tasks. Cards prepared for the students display a picture of some educational material which has been cut from a school supply catalog. This specific component is referred to as IGB because it serves as an excellent time for observation and evaluation of the effectiveness of the overall IGB program. Because it is designed for students to function independently, teachers and other contact persons can observe student behavior and evaluate student performance in order to answer each of the following questions:

1) How well does the student retrieve cues from his notebook rather than from an adult?
2) Is the child able to retrieve materials independently, set up work task, recognize completion of task, and clean up and reshelve task materials?
3) Is the student able to work independently and efficiently with little or no off-task behaviors?
4) Is the student able to seek help from an adult or peer when necessary?
5) Is the student able to sequence events and apply this sequence to what is expected of him?

   For example: Step 1: Get notebook, retrieve assignment
   Step 2: Find assigned task on shelf
   Step 3: Take materials to table, interact with and complete task
   Step 4: Return task to the shelf
   Step 5: Repeat the process

6) Is the student capable of maintaining behavior for delayed payoff, or must reinforcers be continuous in order to maintain task behavior?
7) Is the student able to recognize completion of assignment, and is he able to initiate leisure activity until the bell rings to signal completion of this component?

In addition to providing observation and evaluation time, IGB also serves as a practice period for students to increase attending and independent work skills.

COMPONENT 5: Reinforcers

In order to enhance left to right progression, delay of payoff for performance, and responsibility for payoff, two reinforcer systems are initiated within the IGB design.

When students enter the classroom each morning, once they have checked in, they must go to the reinforcer box. This is nothing more than a box containing several pictures of food, drink, toys, or activities. Each student selects one picture to serve as his reinforcer for that day, and places it on the front page of his notebook. This procedure was instituted to provide the child with an opportunity to execute some control over his environment. Each time the student is reinforced during that day, the teacher or other adult utilizes whatever reinforcer the child has chosen.

In addition, two periods-IGB and Station Rotation were chosen to serve as token or delayed payoff times. Tags which are color-coded and stamped with five dots are placed in each student's notebook. It is his responsibility to retrieve these cards at the commencement of either of these periods. He must take them with him from station to station, or from task to task. Students are intermittently reinforced for on-target, attending behaviors by punching one hole on the appropriate card. At the end of the period, if all five dots have been punched, the child receives a reinforcer from the clothesline. If all five dots have not been punched, the child loses his opportunity to get something from the line. Treats such as chips, pretzels, popcorn, small toys, yarn, cellophane or other sensory materials are placed in zip-loc bags and clipped to the rope with clothespins. Students must hang their reinforcer cards on a specified nail and retrieve the desired payoff. Students remove the sticker from the zip-loc bag and place it on their shirts. Other personnel on the school campus have been informed and are very cooperative about giving special attention to those students wearing the sticker.

Again, this system has been designed to enhance delayed payoff, to allow the child to have some control over what happens to him, and to encourage independence and responsibility.

TOOLS FOR I.G.B. IMPLEMENTATION

TOOL 1: Symbol System

In order to provide a systematic alternative to teacher cueing, a symbol system utilizing stick figure representations was devised. Photographs of daily activities were taken in the classroom; stick figure symbols were then drawn to approximate the activity depicted in the photograph. This procedure was followed for each scheduling component (circle time, snack, art, stations, etc.) as well as for each of the nine stations located in the classroom. These symbols were then utilized: 1) in the students notebook to provide him with a systematic approach for retrieving all of his assignments for the day, and 2) as a visual label to define each station within the classroom (the appropriate station symbol was placed on the wall for each respective station). Each of the symbols is presented on the following pages.

TOOL 2: BAC (Book of Alternative Cueing)

-"Backbone" of IGB program
-Allows teacher to step "back" and reinforce student performance rather than cueing student response.

Inherent in the IGB design is the shift from teacher cueing to alternative cueing methods designed to enhance independence and self-structuring or self-cueing. The "BAC", or Book of Alternative Cueing, supplies the child with systematic cueing for daily classroom programming. Contained within the child's BAC is all of the information he needs in order to function adequately and independently throughout the day. The child's chosen reinforcer and reinforcer cards, his lunch ticket, and his assignment for workjobs, station rotation, IGB, art, and clean-up are all included in his book. BAC's were designed to provide the student with a means for retrieving cues rather than depending on teacher cues as crutches for responding.

GUIDELINES TO FOLLOW IN DEVELOPING A STUDENT BAC

Materials Needed

3 ring notebook
Several plastic protective pages
3 x 5 cards of various colors
School supply catalogues
Magazines
Shipping tags and rings
Photographs of students
Binder clips

Design

BAC design is crucial if the child is going to achieve independence in retrieving rather than merely receiving cues. Materials contained within the student BAC must be geared specifically to his level of functioning in order to insure this independence. For example, one student's notebook might be carefully color-coded, with cues being actual representations such as photographs and magazine pictures, whereas

another student's book might contain only symbolic representations (drawings, stick figures, etc.), or perhaps only printed cues.

A typical BAC would contain the following assignment pages:

Reinforcer Page: Drawing or picture of edible or activity the child has chosen to serve as reinforcer for the day.

Workjobs Page: Color-coded 3x5 schedule card
Color-coded, numbered 3x5 assignment card

Stations Page: Color-coded 3x5 schedule card
Photograph/symbolic representation of students performing at station

Art Page: Color-coded 3x5 schedule card
Picture of art material cut from school supply catalogue pasted on 3x5 card (clay, paint, scissors, crayons, etc.)

IGB Page: Color-coded 3x5 schedule card
Picture of educational task cut from school supply catalogue pasted on 3x5 card (puzzle, peg boards, Lotto games, geoboards, etc.)

Clean-up Page: Color-coded 3x5 schedule card
Picture of cleaning tool cut from department store catalogue (bucket, broom, dustpan, vacuum, mop, etc.)

Laminated Schedule Sheets: To be used for reinforcers (e.g. 10 stickers for on-target performance = coke)

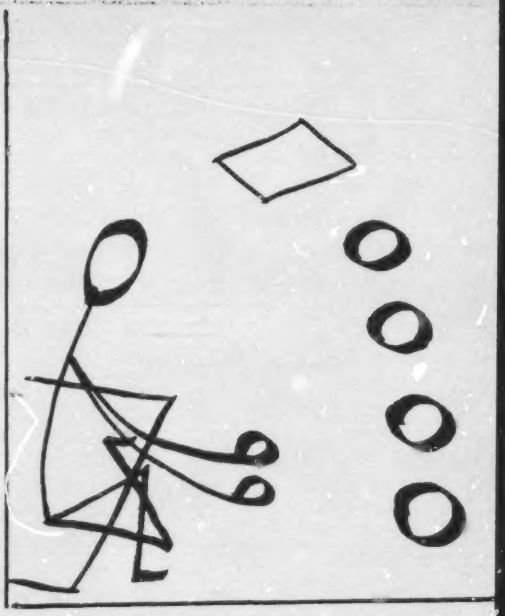
Lunch Ticket

Reinforcer Cards

The plastic pages were chosen in order to gear the child's notebook to his level of functioning at any given moment. Cards can be taped outside the page so that the child can remove the card and take it with him, or they can be slipped inside the page requiring that the child retrieve his assignment in the absence of visual cues.

In addition to providing the student with a means for retrieving cues, BAC also encourages left to right, top to bottom, and front to back progression behaviors - behaviors which certainly are desirable pre-requisites for adequate adaptation and functioning in daily living.

SAMPLE BAC PAGES



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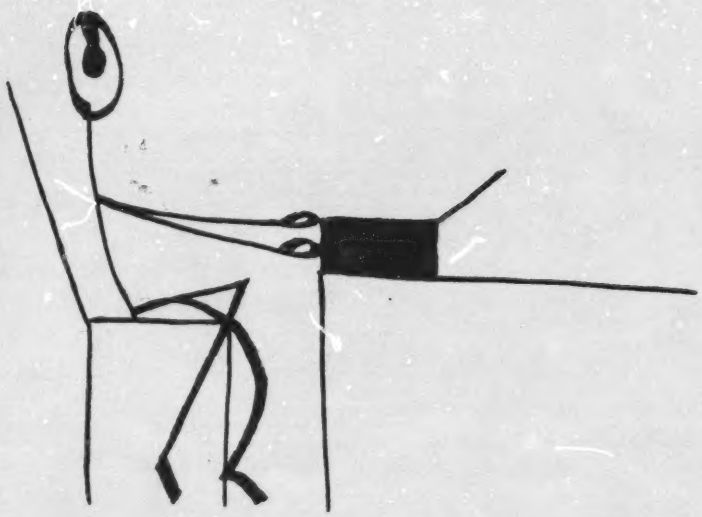
Sample page showing assignment for workjobs



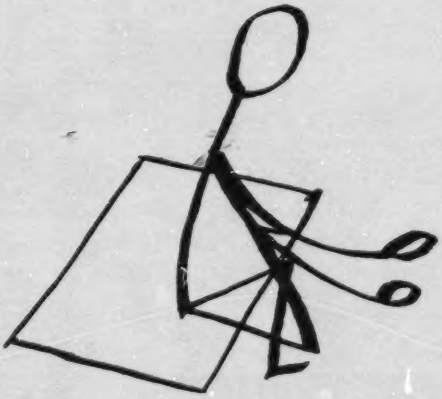
Sample page showing assignment for station rotation

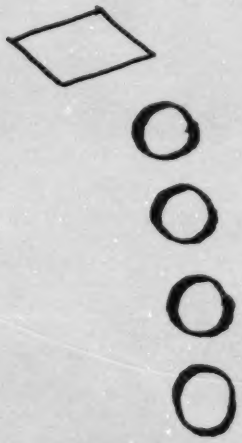
SYMBOLS

Morning Circle

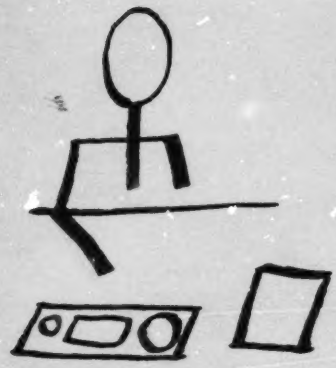
Sesame Street

Snack



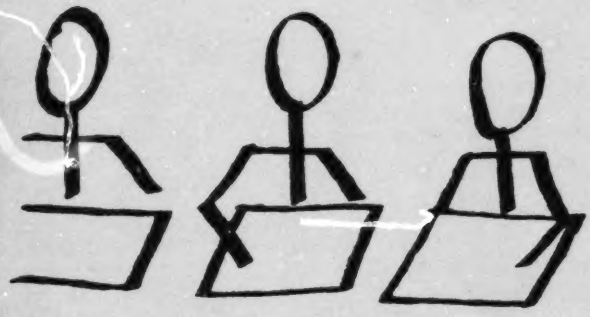


Workjobs

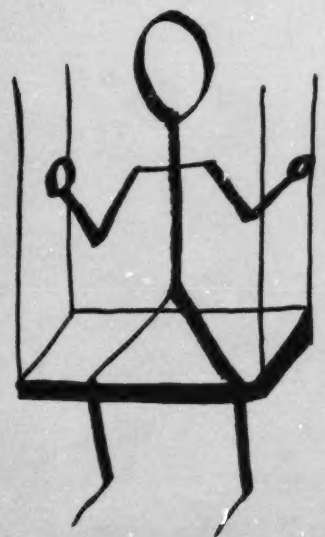


Bucket Work

Station Rotation

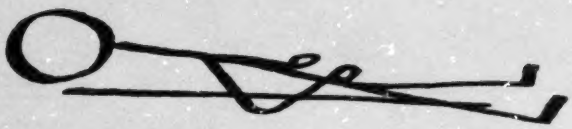


Lunch

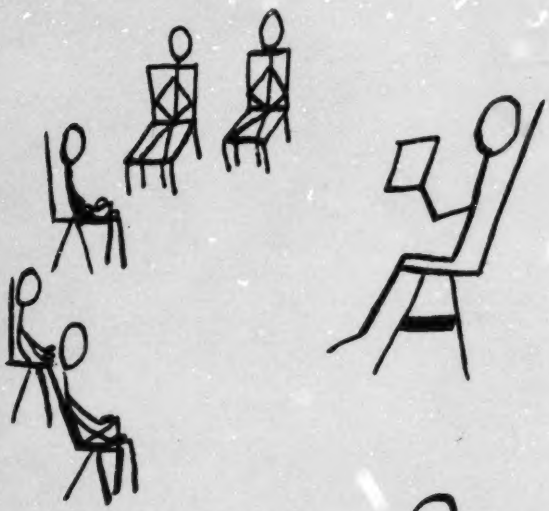


Outdoor Play

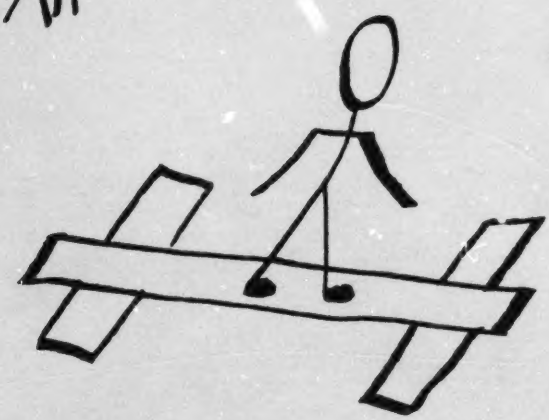
Grooming



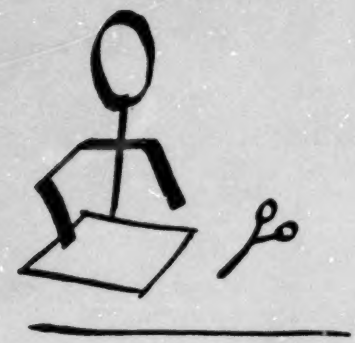
Rest



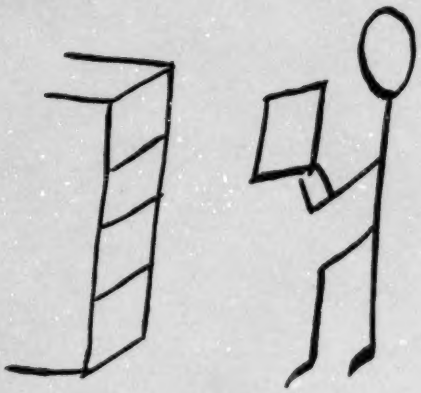
Language Circle



Obstacle Course



Art

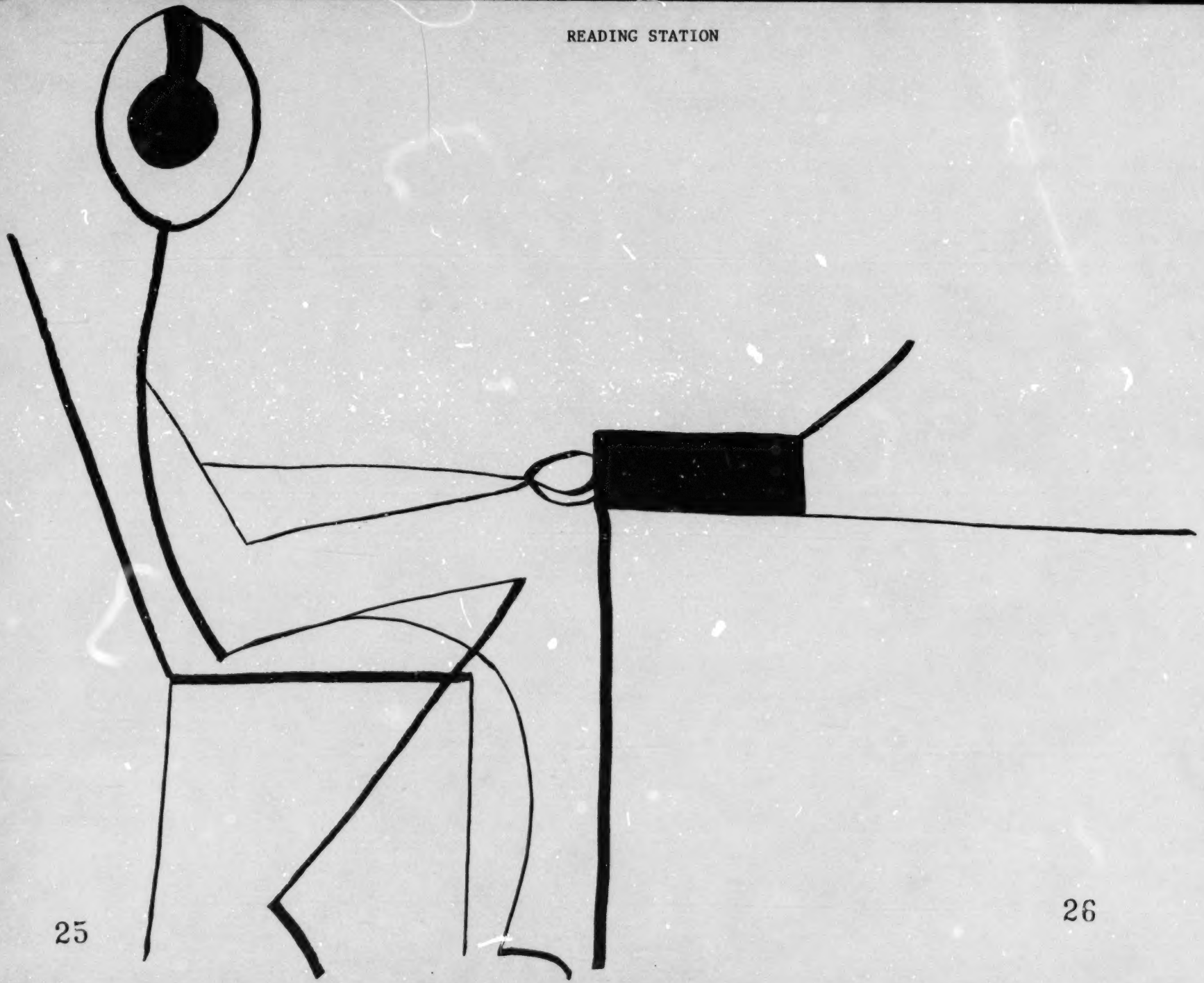


I.G.B.

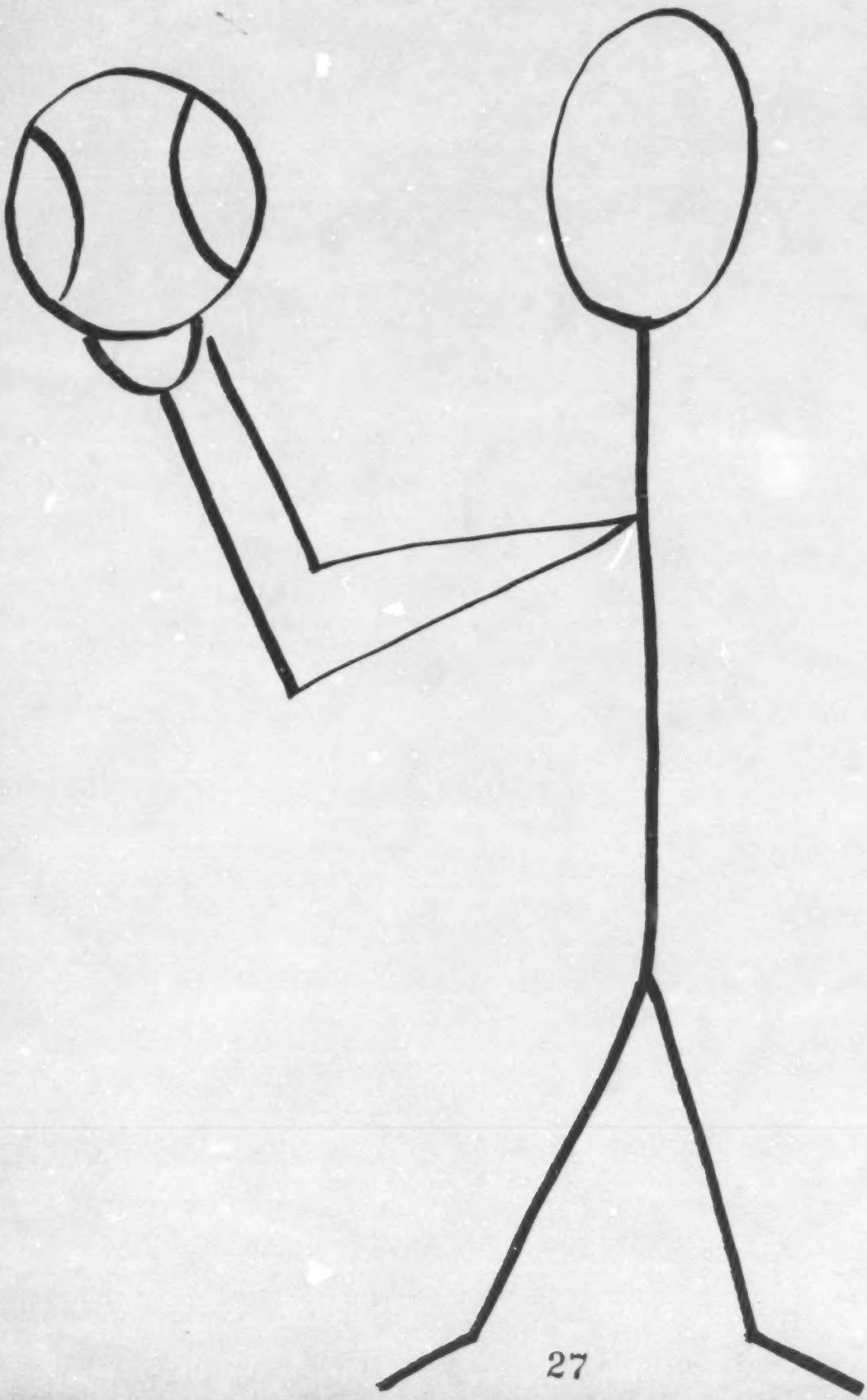
Clean-up

Bus time

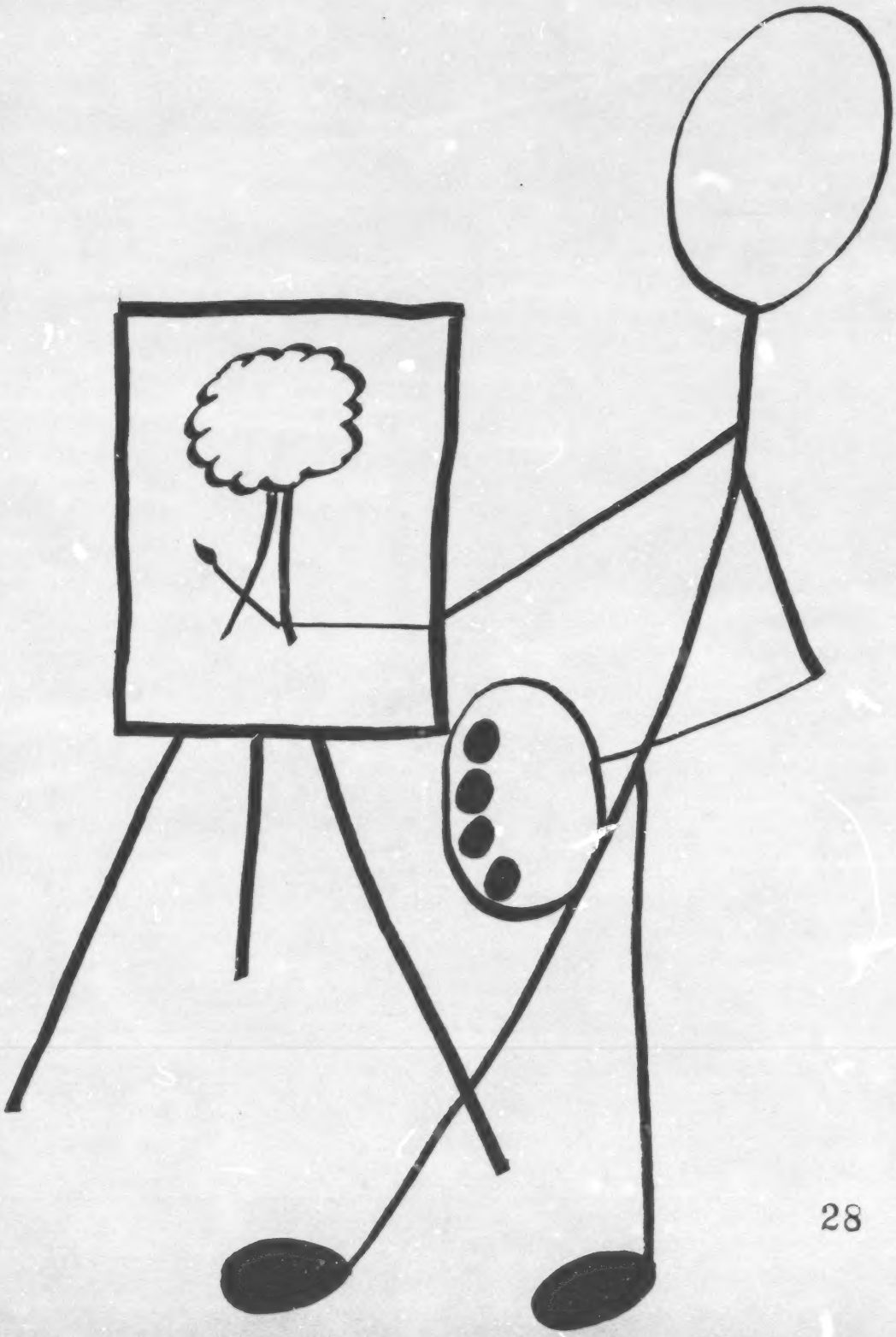
READING STATION



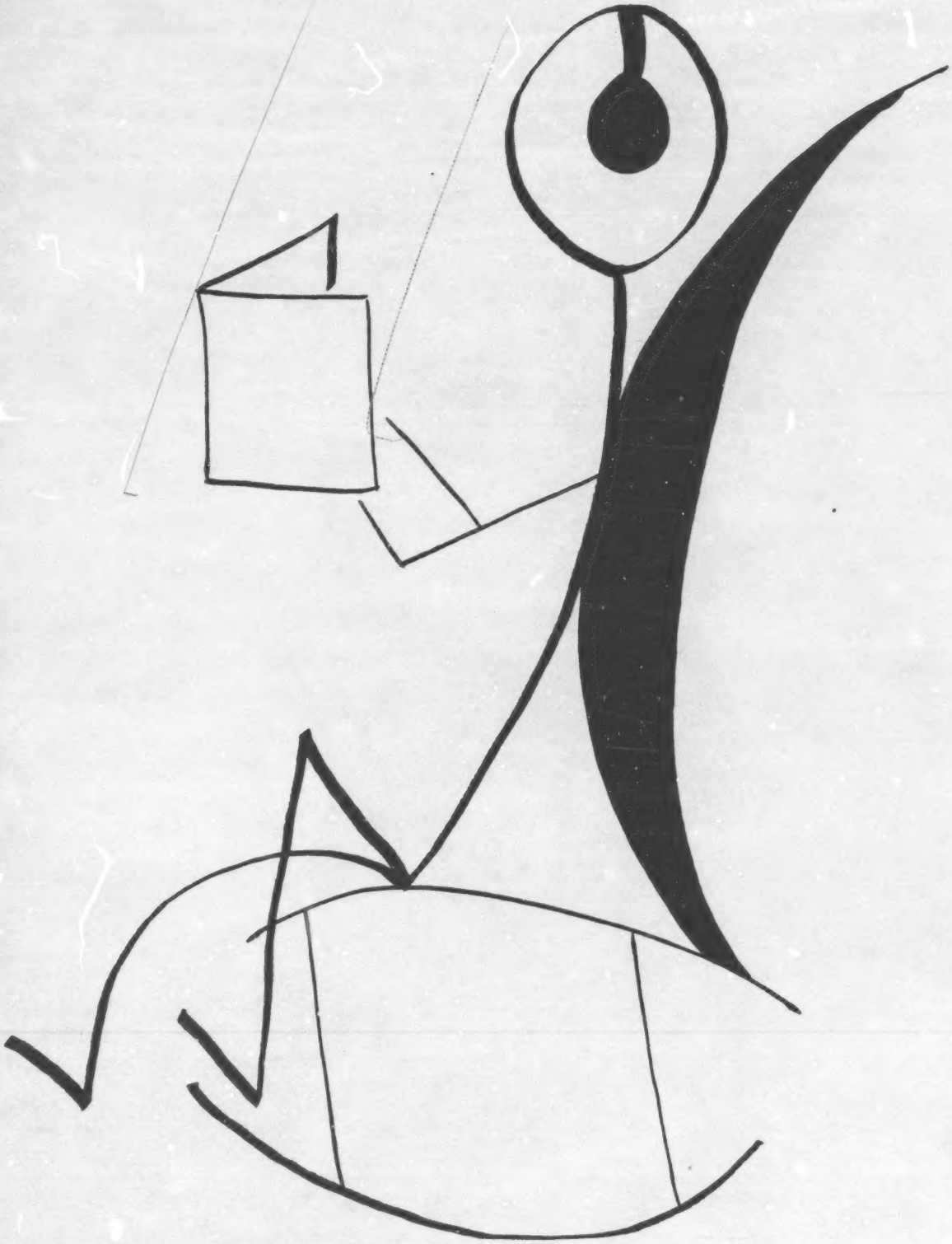
GROSS MOTOR STATION



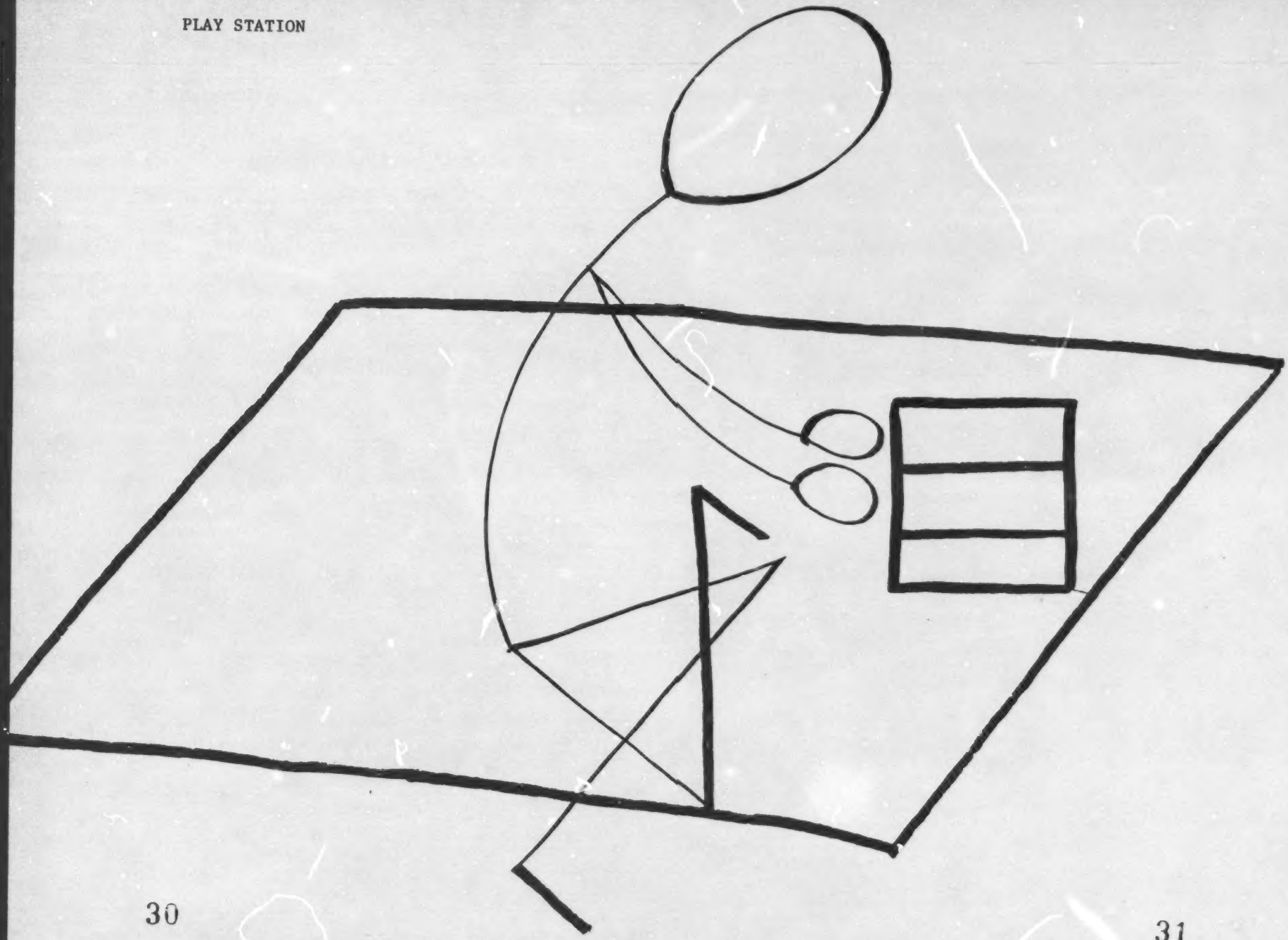
ART STATION



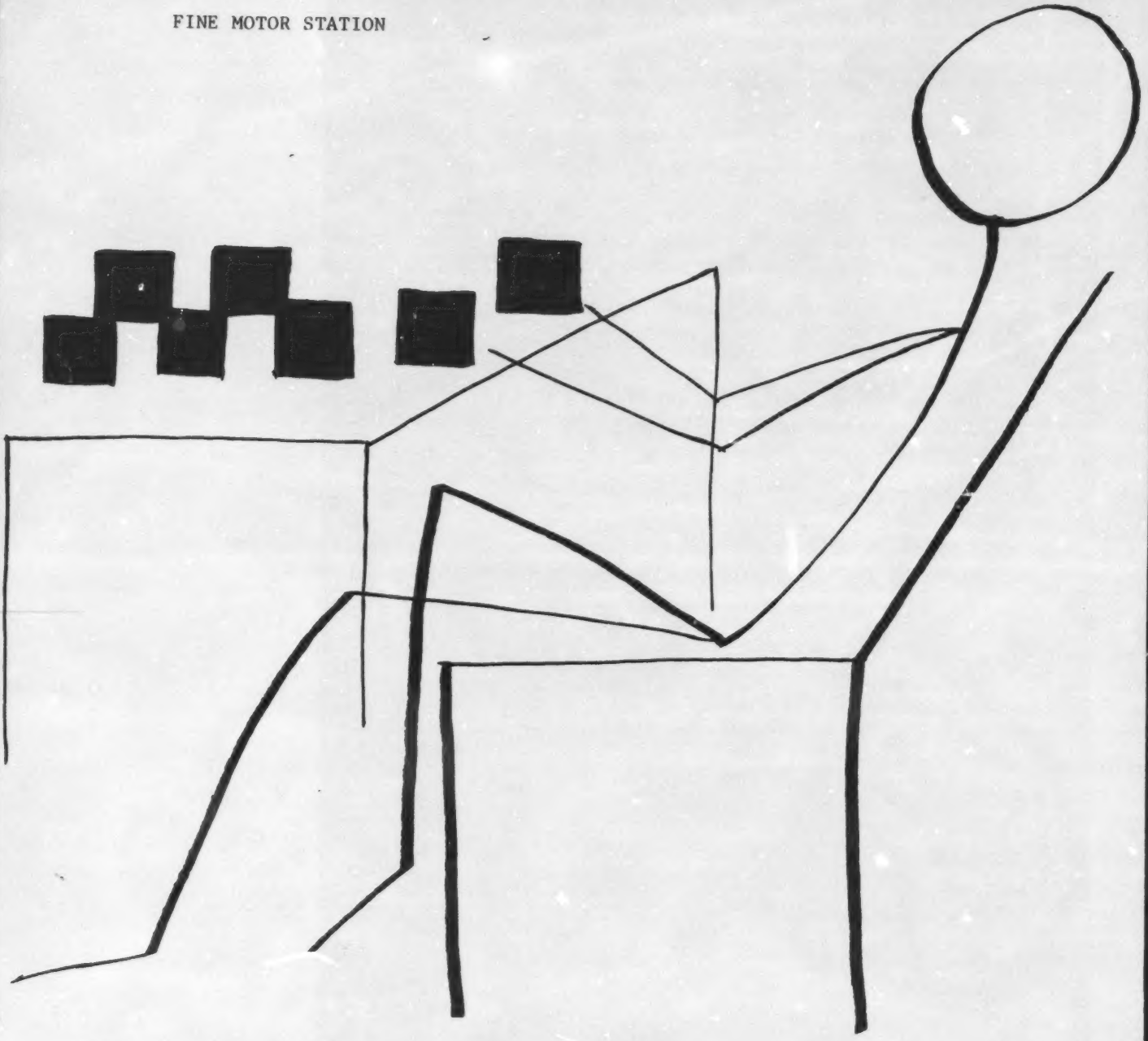
LIBRARY STATION

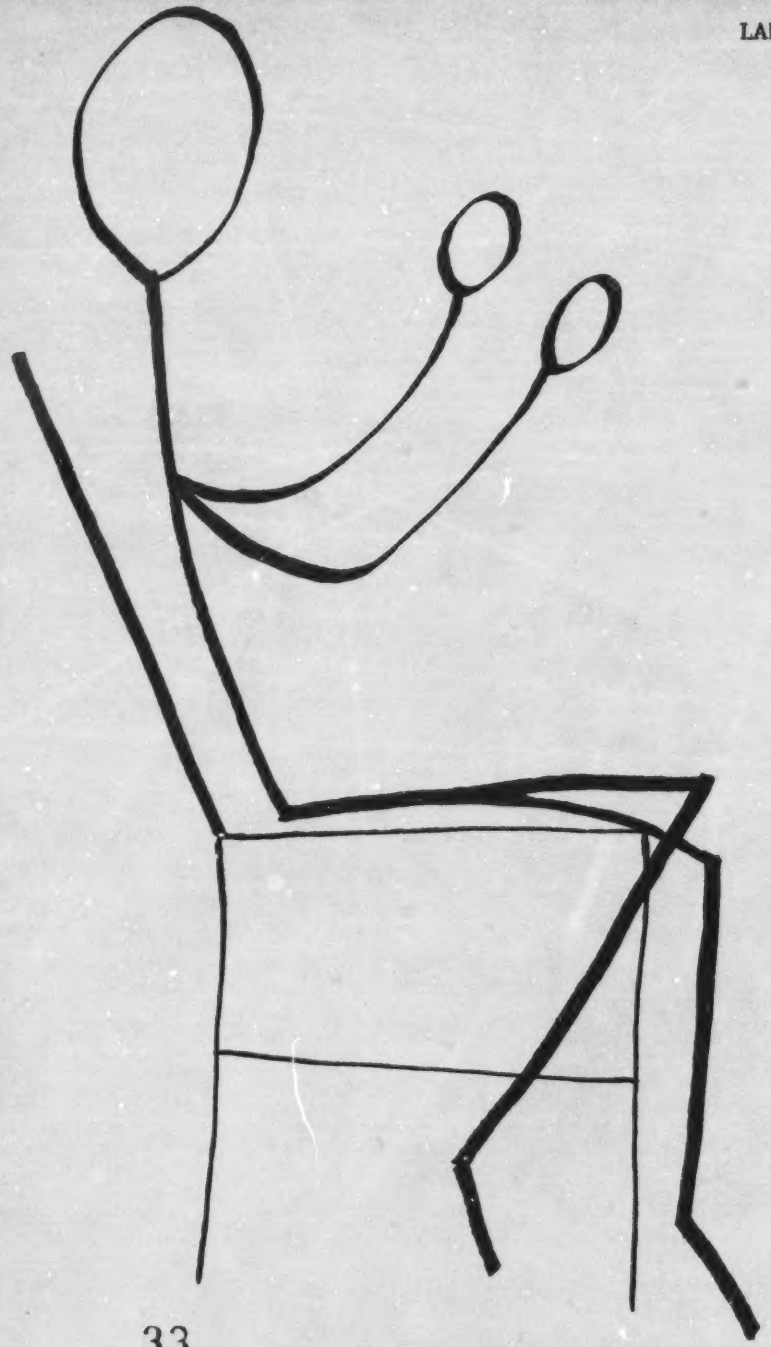


PLAY STATION



FINE MOTOR STATION





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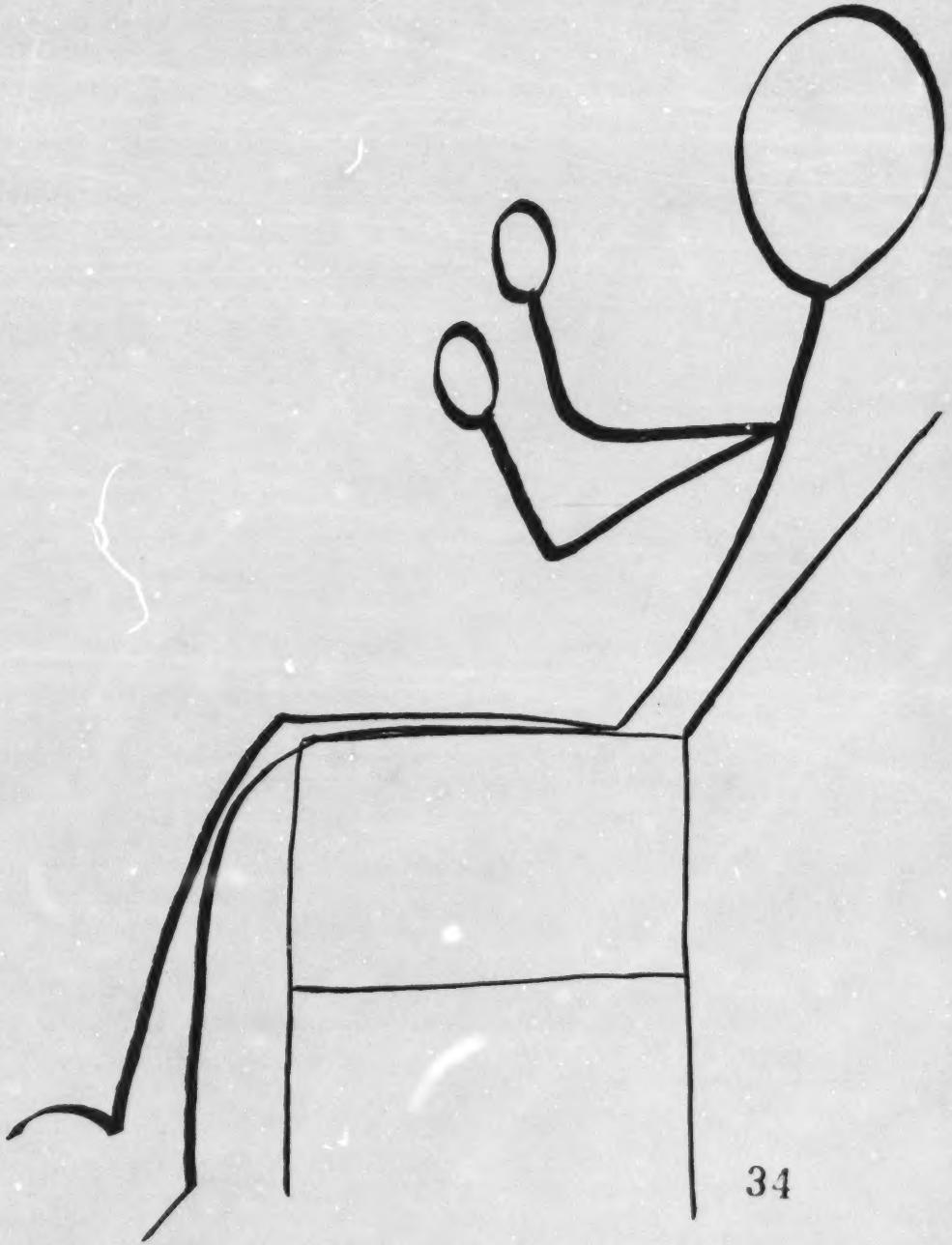

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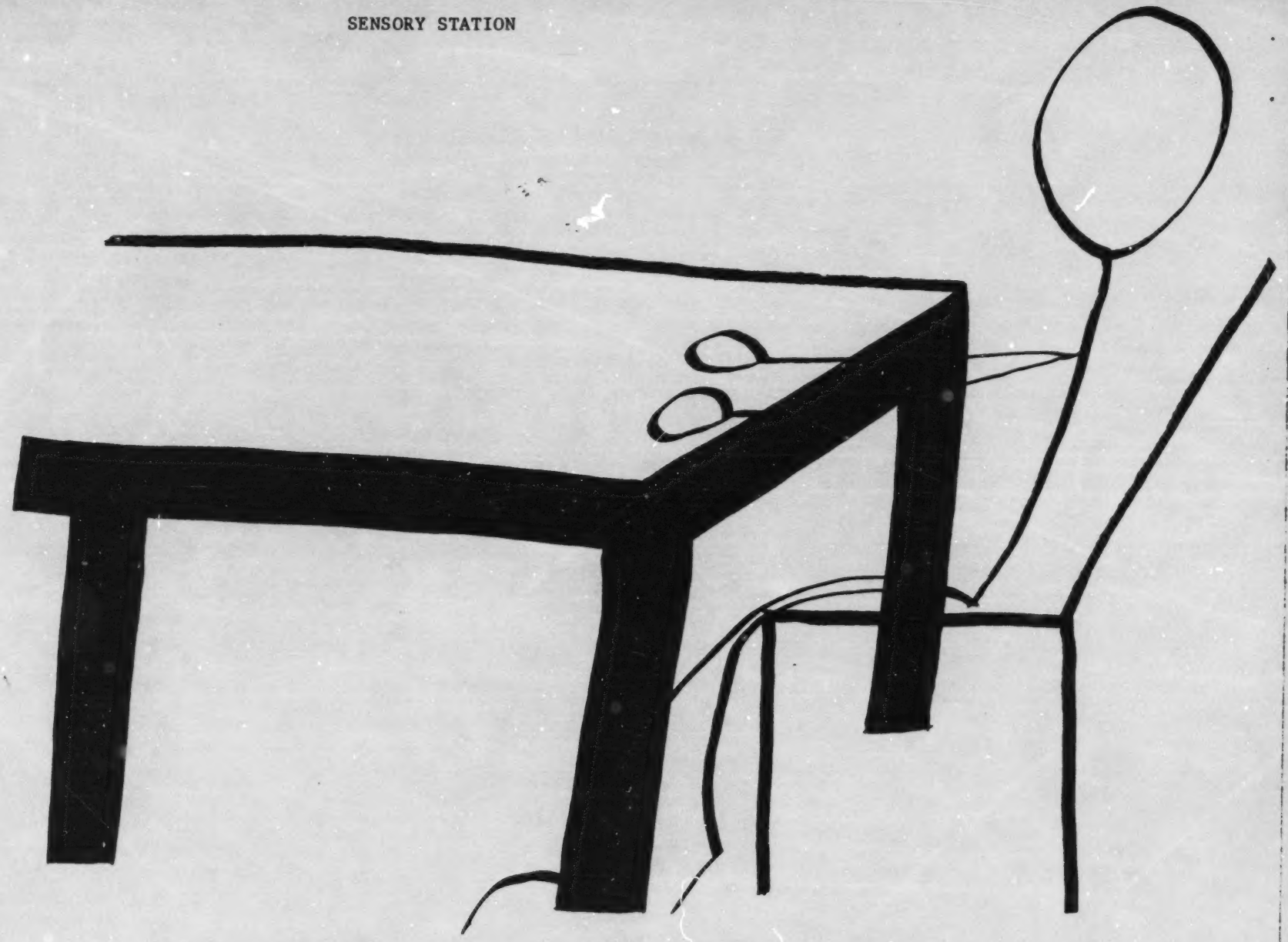
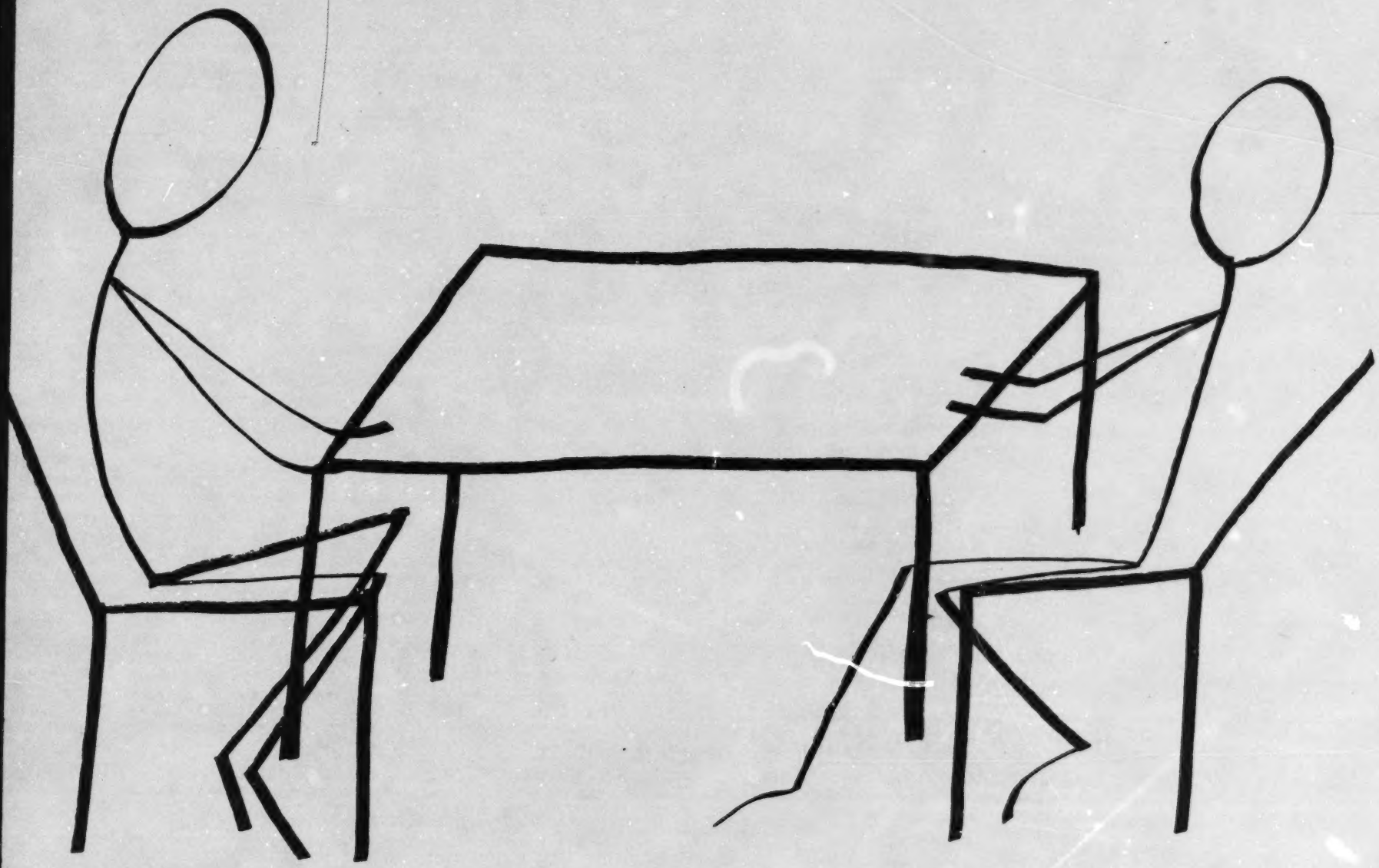
SENSORY STATION



COGNITIVE STATION



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